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EXAMINER

SHAPIRO, LEONID

ART UNIT

PAPER NUMBER

2673

DATE MAILED: 03/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/728,023

Applicant(s)

CANOVA, FRANCIS

Examiner

Leonid Shapiro

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Drawings

1. The proposed drawing correction for Figs. 17-18, filed on 02-07-03 have been received and accepted.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-5 rejected under 35 U.S.C. 102(e) as being anticipated by Narayanaswamy et al. (US Patent No. 6,144,358).

As to claim 1, Narayanaswamy et al. teaches a display apparatus for providing multi-sided viewing functionality to a portable computer system with: a) a front cover mechanically and electrically coupled to portable computer system front cover comprising a hinge (See Fig. 1a and 1b, items 100,102,104,106 in description See Col. 2, Lines 16-52); b) a first display component coupled to front cover (See Fig. 1a and 1b, items 100,102,104,106 in description See Col. 2, Lines 16-52); c) a second display component coupled to a portable computer system (See Fig. 1a and 1b, items 100,102,104,106 in description See Col. 2, Lines 16-52); d) a display control circuit for enabling first display component and second display component, display

Art Unit: 2673

control circuit responsive to the orientation of front cover (See Figs. 2-3 items 200,300, in description See from Col. 3, Line 12 to Col. 4, Line10).

As to claim 2, Narayanaswamy et al. teaches first and second display component comprise a front display portion and rear display portion (See Fig. 1a and 1b, items 100,102,104,106 in description See Col. 2, Lines 16-52).

As to claim 3, Narayanaswamy et al. teaches about hinging mechanism of front cover (hinge portion) is adapted to open and close front cover, such that when front cover is open, front cover is in an open position, and when front cover is closed front cover in a default position (See Figs. 1a and 1b, 4, items 100,102,104,106 in description See Col. 2, Lines 16-52).

As to claim 4, Narayanaswamy et al. teaches about a display control circuit, responsive to default position of front cover, activates front display portion of first display component of front cover to enable viewing functionality of front display portion of first display component (See Figs. 2-3 items 200,300, in description See from Col. 3, Line 12 to Col. 4, Line10).

As to claim 5, Narayanaswamy et al. teaches about a display control circuit, responsive to open position of front cover (hinge portion), activates rear display portion of first display component of front cover and front display portion of second display component to enable viewing functionality of rear display portion of first display component front display portion of second display component (See Figs. 2-3 items 200,300, in description See from Col. 3, Line 12 to Col. 4, Line10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswamy et al. in view of Moscovich et al. (US Patent No. 6,343,006 B1).

Narayanaswamy et al. teaches a display apparatus for providing multi-sided viewing functionality to a portable computer system with: a) a front cover mechanically and electrically coupled to portable computer system front cover comprising a hinge for providing opening and closing functionality to front cover, wherein closed front cover is a default position (See Fig. 1a and 1b, items 100,102,104,106 in description See Col. 2, Lines 16-52); b) a first display component coupled to front cover, first display component comprising a front panel and a rear display panel (See Fig. 1a and 1b, items 100,102,104,106 in description See Col. 2, Lines 16-52); c) a second display component coupled to a portable computer system (See Fig. 1a and 1b, items 100,102,104,106 in description See Col. 2, Lines 16-52); d) a display control circuit for enabling first display component and second display component, display control circuit responsive to the orientation of front cover (See Figs. 2-3 items 200,300, in description See from Col. 3, Line 12 to Col. 4, Line10).

Narayanaswamy et al. does not show second display component coupled to palmtop computer system comprising a front display panel and a rear display panel.

Art Unit: 2673

As to claims 7,10, Narayanaswamy et al. and Moscovich et al. do not show first and second display component comprise a thin flexible material analogous to mylar.

Albert et al. teaches ITO-coated mylar and ITO for electronic ink display (See Fig. 8E, items 831-832, in description See Col.18, Lines 31-40). It would have been obvious to the one ordinary skill in the art in the time of invention to use mylar and ITO as shown by Albert et al. in Narayanaswamy et al. and Moscovich et al. apparatus in order to produce flexible, easy manufactured display (See Col. 2, Lines 11-15 in the Albert et al reference).

5. Claims 12-13, 15-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswamy et al., Moscovich et al. and Albert et al. as aforementioned in claim 8 in view of Albert (US Patent No. 6,392,786 B1).

As to claims 12-13, 15, Narayanaswamy et al., Moscovich et al. and Albert et al. do not show first colored liquid and second colored liquid where sealed chamber is predominately filled with first liquid and second colored liquid is black ink

Albert teaches first colored liquid and second colored liquid where sealed chamber is predominately filled with first liquid and second colored liquid is black ink (See Fig. 1, items 114, 116, in description see Col. 7, Lines 18-25, Col. 9, lines 51-53 and Col. 10, lines 40-44). It would have been obvious to the one ordinary skill in the art in the time of invention to use first colored liquid and second colored liquid where sealed chamber is predominately filled with first liquid and second colored liquid is black ink as shown by Albert in Narayanaswamy et al., Moscovich et al. and Albert et al. apparatus in order to produce flexible, easy manufactured display (See Col. 2, Lines 11-15 in the Albert et al reference).

Art Unit: 2673

Moscovich et al. teaches first display and second display component coupled to computer system (See Fig. 43, items 170, 174, 176, 178, in description See Col. 11, Lines 36-49). It would have been obvious to the one ordinary skill in the art in the time of invention to implement second display component as shown by Moscovich et al. in Narayanaswamy et al. apparatus still retaining front and rear display panel (as shown in Fig. 1A and 1B, items 102, 104 in Narayanaswamy et al. reference) in order to simulate the display capabilities of devices having much larger screens (See Col. 1, Lines 28-29 Narayanaswamy et al. reference).

4. Claims 7-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswamy et al. and Moscovich et al. as aforementioned in claim 6 in view of Albert et al. (US Patent No. 6,252,564 B1).

As to claims 8-9, 11, Narayanaswamy et al. and Moscovich et al. do not show transparent material comprising first and second layer, coupled together to form a sealed chamber two transparent conducting layers.

Albert et al. teaches transparent material comprising first and second layer, coupled together to form a sealed chamber two transparent conducting layers (See Figs. 5A-5F, items 40-48, in description See Col. 112, Lines 14-61). It would have been obvious to the one ordinary skill in the art in the time of invention to use first and second transparent conducting layers as shown by Albert et al. in Narayanaswamy et al. and Moscovich et al. apparatus in order to produce flexible, easy manufactured display (See Col. 2, Lines 11-15 in the Albert et al reference).

Art Unit: 2673

As to claims 15-18, Narayanaswamy et al., Moscovich et al. and Albert et al. do not teach black ink is transparently encapsulated, electrostatically charged and attracted to voltage provided by display control circuit.

Albert teaches black ink is transparently encapsulated, electrostatically charged and attracted to voltage provided by display control circuit (See Fig. 1, items 114, 116, in description see Col. 1, Lines 23-35, Col. 4, Lines 20-40). It would have been obvious to the one ordinary skill in the art in the time of invention to use black ink is transparently encapsulated, electrostatically charged and attracted to voltage provided by display control circuit as shown by Albert in Narayanaswamy et al., Moscovich et al. and Albert et al. apparatus in order to produce flexible, easy manufactured display (See Col. 2, Lines 11-15 in the Albert et al reference).

6. Claim 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswamy et al., Moscovich et al., Albert et al. and Albert as aforementioned in claim 12 in view of Helsin et al. (US Patent No. 6,326,613 B1).

Narayanaswamy et al., Moscovich et al., Albert et al. and Albert do not show first colored liquid is white ink.

Helsin et al. teaches ink white particles (See Col. 8, Lines 1-16). It would have been obvious to the one ordinary skill in the art in the time of invention to use white ink as shown by Helsin et al. in Narayanaswamy et al., Moscovich et al., Albert et al. and Albert apparatus in order to produce flexible, easy manufactured display (See Col. 2, Lines 11-15 in the Albert et al reference).

Art Unit: 2673

7. Claims 19-20, 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswamy et al. in view of Kim (US Patent No. 6,466,292 B1).

As to claims 19, 25, Narayanaswamy et al. teaches a housing supporting a first display component (See Fig. 1B, item 106, in description See Col. 2, Lines 16-42); a flippable cover hinged to housing and having an open state and a closed state, with a second display component having affront panel and back display panel (See Fig. 1A and 1B, 100, 102, 104, in description See Col. 2, Lines 16-42); front display panel is active to display first images provided flippable cover is in closed state (See Fig. 1A, item 102).

Narayanaswamy et al. does not show upon flippable cover opening to open state, front display becomes deactivated, back display panel becomes activated and displays first images and first display component becomes activated for the display of second images.

Kim teaches change images on front and rear displays based on the folder switch (See Fig. 4, items 200a-200b, in description See from col. 6, Line45 to Col. 7, Line 3). It would have been obvious to the one ordinary skill in the art in the time of invention to implement image switching as shown by Kim in Narayanaswamy et al. apparatus in order to change images when moving between open and closed position of flippable cover (See Col. 3, Lines 66-67 in Kim reference).

As to claim 20, Narayanaswamy et al. teaches first and second display components are flat panel display screens (See Figs. 1A and 1B, items 104, 106, in description See Col. 2, Lines 44-45).

Art Unit: 2673

8. Claims 22-23 and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswamy et al. in view of Moscovich et al. and further in view of Kim.

As to claims 22,26, Narayanaswamy et al. teaches about a portable electronic device with: a housing supporting a first display component (See Fig. 1B, item 106, in description See Col. 2, Lines 16-42); a first flippable cover hinged to housing and having an open state and a closed state, first flippable cover has a second display component with a front display panel and back display panel (See Fig. 1A and 1B, 100, 102, 104, in description See Col. 2, Lines 16-42).

Narayanaswamy et al. does not teach about a second flippable cover hinged to housing opposite to first flappable cover and having an open state and a closed state, second flippable cover with a third display component having a front display panel and back display panel

Moscovich et al. teaches first display and second display component coupled to computer system (See Fig. 43, items 170,174, 176, 178, in description See Col. 11, Lines 36-49). It would have been obvious to the one ordinary skill in the art in the time of invention to implement second display component as shown by Moscovich et al. in Narayanaswamy et al. apparatus still retaining front and rear display panel (as shown in Fig. 1A and 1B, items 102, 104 in Narayanaswamy et al. reference) in order to simulate the display capabilities of devices having much larger screens (See Col. 1, Lines 28-29 Narayanaswamy et al. reference).

Narayanaswamy et al. and Moscovich et al. do not show front panel of second cover is active to display first images provided first and second cover are closed; upon second cover opening, front display panel of second cover becomes deactivated, back display panel of second cover becomes activated and displays first images and first display panel of the first cover becomes activated for the display of second image; upon first cover opening while second cover

Art Unit: 2673

is open, front display panel of first cover becomes deactivated, back display panel of first cover becomes activated and displays second images and first display component becomes activated for the display third images.

Kim teaches change images on front and rear displays based on the folder switch (See Fig. 4, items 200a-200b, in description See from col. 6, Line 45 to Col. 7, Line 3). It would have been obvious to the one ordinary skill in the art in the time of invention to implement image switching as shown by Kim in Narayanaswamy et al. and Moscovich et al. apparatus in order to change images when moving between open and closed position of flippable covers (See Col. 3, lines 66-67 in Kim reference).

As to claim 23, Narayanaswamy et al. teaches first and second and third display components are flat panel display screens (See Figs. 1A and 1B, items 104, 106, in description See Col. 2, Lines 44-45).

9. Claims 21, 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswamy et al., Moscovich et al. and Kim as aforementioned in claims 19 and 23 in view of Helsin et al.

Narayanaswamy et al., Moscovich et al. and Kim do not show electronic ink technology used for flat panel display screen.

Helsin et al. teaches to apply electronic ink technology for mirror assembly (See Fig. 9, item 102, in description See from Col. 7, line 63 to col. 8, Line 20). It would have been obvious to the one ordinary skill in the art in the time of invention to use electronic ink technology as shown by Helsin et al. in Narayanaswamy et al., Moscovich et al. and Kim apparatus.

Art Unit: 2673

Response to Amendment

10. Applicant's arguments with respect to claims 1-26, filed on 02-07-03 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

The Yamamoto (US Patent 6,297,945 B1) reference discloses portable electronic terminal apparatus having a plurality of displays.

The Batio (US Patent 5,949,643) reference discloses portable computer having split keyboard and pivotal display screen halves.

Telephone inquiry.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 703-305-5661. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-305-4938. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Application/Control Number: 09/728,023

Page 12

Art Unit: 2673

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February 20, 2003



DIPIN SHALWALA
SENIOR PATENT EXAMINER
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